

Supplementary Material

Table S1. Physicochemical parameters of water in the Kamień sedimentation pond (inflow and chambers: C-1, C-2, C-3) during the growing seasons in 2014-2015 and 2018-2019 (mean, \pm SD).

Parameters	2014 - 2015				2018 - 2019			
	Inflow	C-1	C-2	C-3	Inflow	C-1	C-2	C-3
T	14.5	15.6	14.9	15.5	15.2	16.8	16.5	16.7
(°C)	± 4.8	± 5.2	± 4.9	± 5.2	± 4.0	± 4.3	± 4.3	± 4.4
SDD	n.m.*	0.53	0.54	0.58	n.m.*	0.75	0.84	0.79
(m)		± 0.14	± 0.10	± 0.16		± 0.37	± 0.33	± 0.40
Turbidity	13.5	25.2	24.9	17.1	20.9	22.2	20.0	18.7
(NTU)	± 3.7	± 14.8	± 14.0	± 4.6	± 12.3	± 9.6	± 10.4	± 7.4
TSS	12.7	17.7	14.3	9.8	18.2	16.8	17.3	17.3
(mg L ⁻¹)	± 5.1	± 11.3	± 4.9	± 5.3	± 12.1	± 13.5	± 12.8	± 13.1
PO ₄ ³⁻	0.030	0.031	0.033	0.019	0.028	0.020	0.018	0.017
(mg L ⁻¹)	± 0.020	± 0.022	± 0.019	± 0.012	± 0.010	± 0.014	± 0.008	± 0.009
TN	0.305	0.307	0.278	0.216	0.342	0.311	0.316	0.343
(mg L ⁻¹)	± 0.076	± 0.147	± 0.079	± 0.069	± 0.109	± 0.112	± 0.095	± 0.198
NO ₃ ⁻	0.134	0.161	0.150	0.129	0.139	0.119	0.127	0.121
(mg L ⁻¹)	± 0.027	± 0.050	± 0.043	± 0.039	± 0.047	± 0.037	± 0.051	± 0.078
NH ₄ ³⁺	0.057	0.065	0.066	0.036	0.057	0.029	0.043	0.034
(mg L ⁻¹)	± 0.064	± 0.051	± 0.051	± 0.035	± 0.045	± 0.028	± 0.037	± 0.035
Cl ⁻	105.5	88.6	100.9	92.6	99.2	89.0	85.1	82.7
(mg L ⁻¹)	± 12.8	± 5.0	± 18.3	± 13.8	± 24.7	± 20.4	± 16.7	± 15.9
Mg ²⁺	11.6	14.1	14.0	14.2	30.4	29.7	21.8	21.1
(mg L ⁻¹)	± 4.2	± 2.7	± 4.6	± 3.7	± 10.3	± 12.3	± 11.2	± 12.9

* not measured

Table S2. Average content of trace elements in the Kamień sedimentation pond during the growing seasons in 2014-2015 and 2018-2019 with classification of water quality [35].

Parameter	Range	Average	\pm SD	Threshold value	Water quality class
Ag (μ g L ⁻¹)	<0.01	<0.01	<0.01	≤ 0.005 mg L ⁻¹	I-II
Al (μ g L ⁻¹)	1.53-4.04	2.73	0.95	≤ 0.400 mg L ⁻¹	I-II
As (μ g L ⁻¹)	<0.01	<0.01	<0.01	≤ 0.050 mg L ⁻¹	I-II

B (µg L ⁻¹)	0.77-5.13	2.75	1.81	≤2.000 mg L ⁻¹	I-II
Ba (µg L ⁻¹)	109.25-113.94	112.21	2.05	≤0.500 mg L ⁻¹	I-II
Cd (µg L ⁻¹)	0.01-0.02	0.01	<0.01	≤0.080 µg L ⁻¹	I-II
Cr (µg L ⁻¹)	2.73-3.48	3.04	0.32	≤0.050 mg L ⁻¹	I-II
Co (µg L ⁻¹)	0.69-0.86	0.79	0.08	≤0.050 mg L ⁻¹	I-II
Cu (µg L ⁻¹)	0.75-3.51	1.82	0.89	≤0.050 mg L ⁻¹	I-II
Mo (µg L ⁻¹)	0.07-0.75	0.36	0.29	≤0.040 mg L ⁻¹	I-II
Ni (µg L ⁻¹)	2.89-3.90	3.21	0.33	≤4.000 µg L ⁻¹	I-II
Pb (µg L ⁻¹)	0.17-1.02	0.46	0.34	≤1.200 µg L ⁻¹	I-II
Se (µg L ⁻¹)	<0.01	<0.01	<0.01	≤0.020 mg L ⁻¹	I-II
Ti (µg L ⁻¹)	10.76-12.48	11.27	0.82	≤0.050 mg L ⁻¹	I-II
V (µg L ⁻¹)	0.51-0.78	0.59	0.13	≤0.050 mg L ⁻¹	I-II
Zn (µg L ⁻¹)	20.30-32.80	25.92	4.92	≤1.000 mg L ⁻¹	I-II
Tl (µg L ⁻¹)	0.02-0.10	0.06	0.03	≤0.002 mg L ⁻¹	I-II
Br (µg L ⁻¹)	74.95-77.97	76.57	1.63	*	*
Fe (mg L ⁻¹)	0.03-2.90	0.45	0.50	*	*
Hg (µg L ⁻¹)	<0.01	<0.01	<0.01	*	*
I (µg L ⁻¹)	19.98-23.38	21.36	1.44	*	*
Mn (mg L ⁻¹)	0.05-1.85	0.44	0.43	*	*
Rb (µg L ⁻¹)	8.17-8.84	8.45	0.31	*	*
Si (mg L ⁻¹)	14.84-16.33	15.49	0.54	*	*
Sr (mg L ⁻¹)	0.75-0.77	0.76	0.01	*	*
Y (µg L ⁻¹)	0.03-0.07	0.05	0.02	*	*
Zr (µg L ⁻¹)	0.02-0.03	0.02	<0.01	*	*

* not defined

Table S3. An average structure of phytoplankton, zooplankton and planktivorous fish (% of the total density) in three chambers (C-1, C-2, C-3) of the Kamień sedimentation pond during the growing seasons in 2014-2015 and 2018-2019.

	2014			2015			2018			2019		
	C-1	C-2	C-3	C-1	C-2	C-3	C-1	C-2	C-3	C-1	C-2	C-3
Phytoplankton												
Bacillariophyta	2.2	8.0	7.8	28.6	25.3	11.4	6.7	2.9	1.5	9.1	22.1	17.4
Charophyta	0.2	0.3	0.1	0.3	1.4	0.4	0.2	0.1	0.1	0.1	0	0.1
Chlorophyta	14.4	17.5	23.3	3.2	12.1	29.5	4.6	7.2	1.2	13.0	18.5	13.3
Miozoa	0.2	0.4	0.5	0.0	0.7	0.4	0.7	0.4	0.1	0.2	0.1	0.1
Euglenozoa	29.4	22.6	36.9	65.1	51.8	14.2	9.7	22.7	0.9	1.3	0.5	1.3
Cryptophyta	51.7	49.9	31.3	2.8	3.9	28.4	64.0	23.2	42.0	75.0	57.8	65.3
Ochrophyta	1.0	1.1	0.0	0.0	4.7	15.5	14.0	43.2	54.1	1.1	0.7	2.4
Cyanobacteria	0.9	0.2	0.1	0.0	0.1	0.2	0.1	0.3	0.1	0.2	0.3	0.1
Zooplankton												
Rotifera	64.5	84.2	60.0	60.1	75.6	57.9	87.2	88.1	78.1	89.8	91.9	85.3
Crustacea	35.5	15.8	40.0	39.9	24.4	42.1	12.8	11.9	21.9	10.2	8.1	14.7
Planktivorous fish												
<i>G. cernua</i>	26.3	6.3	20.4	18.9	9.9	12.7	16.1	4.5	21.0	15.4	3.3	13.1
<i>A. brama</i>	16.1	6.6	21.0	21.5	3.8	12.1	16.5	0.9	4.5	15.9	1.5	2.3
<i>P. fluviatilis</i>	19.8	5.2	19.4	20.7	7.5	25.5	20.2	9.0	19.0	19.9	8.8	27.2
<i>R. rutilus</i>	21.6	71.8	30.6	25.7	77.1	43.7	26.6	83.7	54.1	29.6	83.8	56.6
<i>A. alburnus</i>	16.2	10.1	8.6	13.2	1.7	6.0	20.6	1.9	1.4	19.2	2.6	0.8